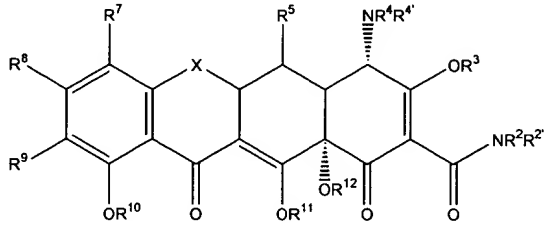
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A substituted tetracycline compound, wherein said compound is of the formula:



(I)

wherein:

X is $CHC(R^{13}Y'Y)$, $CR^{6'}R^6$, S, NR^6, or O;

R^2 is hydrogen, alkyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

R^4 and $R^{4'}$ are each hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

$R^{2'}$, R^3, R^{10}, R^{11} and R^{12} are each hydrogen or a pro-drug moiety;

R^5 is hydrogen, hydroxyl, or a prodrug moiety;

R^6, $R^{6'}$, and R^8 are each independently hydrogen, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, or halogen;

R^7 is hydrogen, dialkylamino, or heteroaryl-amino~~, or $NR^{7e}C(=W')WR^{7a}$~~;

R^{13} is hydrogen, hydroxy, alkyl; alkenyl; alkynyl; alkoxy; alkylthio; alkylsulfinyl; alkylsulfonyl; alkylamino; or an arylalkyl;

Y' and Y are each independently hydrogen; halogen; hydroxyl; cyano, sulfhydryl; amino; alkyl; alkenyl; alkynyl; alkoxy; alkylthio; alkylsulfinyl; alkylsulfonyl; alkylamino; or an arylalkyl;

R^9 is hydrogen~~, $NR^{9e}C(=Z')ZR^{9a}$~~, or heteroaryl-amino;

~~Z is $CR^{9d}R^{9e}$, NR^{9b}, or O;~~

~~Z' is O or S;~~

~~R^{9a}, R^{9b}, R^{9c}, R^{9d}, and R^{9e} are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, arylsulfonyl, alkoxycarbonyl, arylcarbonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic, absent, or a prodrug moiety, and R^{9d} and R^{9e} may be linked to form a ring;~~

~~W is $CR^{7d}R^{7e}$, NR^{7b} or O;~~

~~W' is O or S; and~~

~~R^{7a}, R^{7b}, R^{7c}, R^{7d}, and R^{7e} are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, arylsulfonyl, alkoxycarbonyl, arylcarbonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic, absent, or a prodrug moiety, and R^{7d} and R^{7e} may be linked to form a ring;~~

and pharmaceutically acceptable salts thereof, provided that ~~at least one of~~ R^9 is not hydrogen when R^7 is hydrogen or dialkylamino.

2. (Original) The compound of claim 1, wherein R^2, $R^{2'}$, R^3, R^8, R^{10}, R^{11}, and R^{12} are each hydrogen.

3. (Original) The compound of claim 2, wherein R^4 and $R^{4'}$ are each alkyl.

4. (Original) The compound of claim 3, wherein R^4 and $R^{4'}$ are each methyl

5. (Original) The compound of claim 4, wherein said compound is a derivative of tetracycline, minocycline, sancycline, doxycycline, chlortetracycline, oxytetracycline, demeclocycline, or methacycline.

6. (Original) The compound of claim 4, wherein R^5 is hydrogen.

7. (Original) The compound of claim 6, wherein X is CH_2, and R^7 is hydrogen.

8. (Original) The compound of claim 6, wherein X is CH_2, and R^7 is $N(Me)_2$.

9. (Original) The compound of claim 4, wherein R^5 is hydroxyl or a prodrug moiety, and X is CHR^6.

10. (Original) The compound of claim 9, wherein R^5 is hydroxyl and R^6 is CH_3.

Claims 11-40 (Canceled).

41. (Original) The compound of claim 1, wherein R^9 is heteroaryl-amino.

42. (Currently Amended) The compound of claim 41, wherein said heteroaryl is substituted or unsubstituted thieazolyl.

43. (Currently Amended) The compound of claim 42, wherein said heteroaryl is substituted thieazolyl.

44. (Original) The compound of claim 43, wherein said thiazolyl is substituted with a substituted or unsubstituted aryl.

45. (Original) The compound of claim 46, wherein said aryl is phenyl.

46. (Original) The compound of claim 44, wherein said aryl is substituted with one or more substituents selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, alkoxy, aryloxy, alkylcarbonyl, arylcarbonyl, amido, trifluoromethyl, halogen, nitro, azo, alkyl sulfonyl, and arylsulfonyl.

47. (Original) The compound of claim 46, wherein said substituent is nitro.

48. (Original) The compound of claim 46, wherein said substituent is alkyl.

49. (Original) The compound of claim 48, wherein said alkyl substituent is methyl.

50. (Original) The compound of claim 46, wherein said substituent is selected from the group consisting of alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, aryloxycarbonyl, and amido.

51. (Original) The compound of claim 50, wherein said substituent is alkoxycarbonyl.

52. (Original) The compound of claim 51, wherein said substituent is ethoxycarbonyl.

53. (Currently Amended) The compound of claim 1, wherein said compound is ~~selected from the group consisting of:~~ ~~Doxycycline 9-carbamic acid 9*H*-fluoren-9-ylmethyl ester;~~

~~(9-(Naphthyn-1-yl) doxycycline urea;~~

~~9-(3-Methyl-1-butyl) doxycycline urea;~~

~~9-Phenyl doxycycline urea;~~

~~9-t-Butyl doxycycline urea;~~

~~FMOC-9-amino-doxycycline;~~

~~9-(4'-Chloro-2'-trifluoromethylphenyl) doxycycline urea;~~

~~9-(4'-Fluorophenyl) doxycycline carbamate;~~

~~9-(4'-Methoxyphenyl) doxycycline carbamate;~~

~~9-BOC-amino-doxycycline;~~

9-(Phenylthiazolyl) amino doxycycline.~~;~~

~~9-(Ethylthiazolyl) amino-doxycycline;~~

~~(4-Fluorophenylthiazolyl) amino-doxycycline;~~

~~9-(4'-Methoxyphenylthiazolyl) amino-doxycycline;~~

~~9-(3'-Nitrophenylthiazolyl) amino-doxycycline;~~

~~9-(4'-Methyl, 5'-phenylthiazolyl) amino-doxycycline;~~

~~9-Neopentyl-minocycline-carbamate;~~

~~9-(Phenylthiazolyl) amino-sancycline;~~

~~9-(Adamantylthiazolyl) amino-doxycycline;~~

~~9-(Naphthyn-1-yl-urea) Doxycycline-5-propanoic acid ester;~~

~~Doxycycline-9-Thiocarbamic acid 9*H*-fluoren-9-ylmethyl ester;~~

~~(9-(Naphthyn-1-yl) doxycycline thiourea;~~

~~9-(3-methyl-1-butyl) doxycycline thiourea;~~

~~9-Phenyl doxycycline thiourea;~~

~~9-t-Butyl doxycycline thiourea;~~

~~9-(4'-Chloro-2'-trifluoromethylphenyl) doxycycline thiourea;~~

~~9-(4'-Fluorophenyl) doxycycline thiocarbamate;~~

~~9-(4-Methoxyphenyl) doxycycline thiocarbamate;~~

~~9-Neopentyl-minocycline-thiocarbamate;~~

~~9-(Naphthyn-1-yl) doxycycline thiourea-5-propanoic acid ester;~~

~~Minocycline-9-carbamic acid 9*H*-fluoren-9-ylmethyl ester;~~

~~(9-(Naphthyn-1-yl) minocycline urea;~~

~~9-(3-Methyl-1-butyl) minocycline urea;~~

~~9-Phenyl doxycycline urea;~~

~~9-t-Butyl minocycline urea;~~
~~FMOC 9-amino-minocycline;~~
~~9-(4'-Chloro-2'-trifluoromethylphenyl) minocycline urea;~~
~~9-(4'-Fluorophenyl) minocycline carbamate;~~
~~9-(4'-Methoxyphenyl) minocycline carbamate;~~
~~9-BOC amino-minocycline;~~
~~9-(Phenylthiazolyl) amino minocycline;~~
~~9-(Ethylthiazolyl) amino minocycline;~~
~~(4'-Fluorophenylthiazolyl) amino minocycline;~~
~~9-(4'-Methoxyphenylthiazolyl) amino minocycline;~~
~~9-9-(3'-Nitrophenylthiazolyl) amino minocycline;~~
~~9-(4'-Methyl, 5'-phenylthiazolyl) amino-doxycycline;~~
~~9-Neopentyl doxycycline carbamate;~~

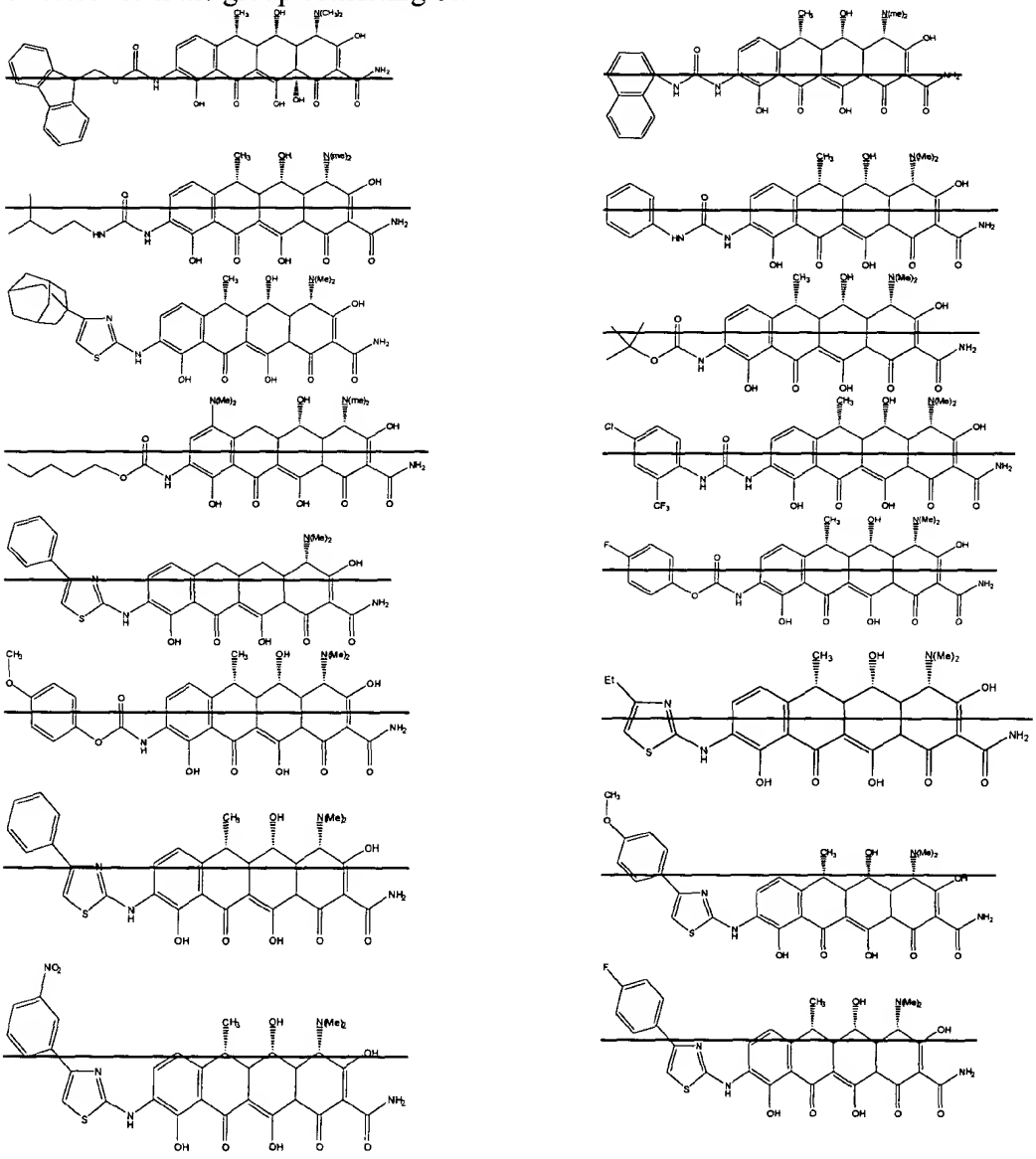
54. (Currently Amended) The compound of claim 1, wherein said compound is ~~selected from the group consisting of:~~ 9-(Phenylthiazolyl) amino minocycline~~;~~
~~9-(Adamantylthiazolyl) amino minocycline;~~
~~Minocycline 9-thiocarbamic acid 9*H*-fluoren-9-ylmethyl ester;~~
~~(9-(Naphthyn-1-yl) minocycline thiourea;~~
~~9-(3'-Methyl-1-butyl) minocycline thiourea;~~
~~9-Phenyl minocycline thiourea;~~
~~9-t-Butyl minocycline thiourea;~~
~~9-(4'-Fluorophenyl) minocycline thiocarbamate;~~
~~9-(4'-Methoxyphenyl) minocycline thiocarbamate;~~
~~9-Neopentyl doxycycline thiocarbamate;~~
~~9-(2'-Bromoethyl) doxycycline carbamate;~~
~~9-(n-Pentyl) minocycline carbamate;~~
~~9-(4'-Benzoylbenzoyl) amino-doxycycline;~~
~~7-(3'-Nitrophenylthiazolyl) amino sancycline;~~
~~9-(3'-Ethoxycarbonylthiazolyl) amino-doxycycline;~~
~~7-(4'-Methylphenyl) sancycline carbamate;~~
~~9-(4'-Trifluoromethoxyphenyl) minocycline urea;~~
~~9-(3', 5'-diperfluorophenyl) minocycline thiourea;~~
~~9-Prop-2'-enyl minocycline carbamate;~~
~~9-(4'-Chloro, 2'-nitrophenyl) minocycline urea;~~
~~9-Ethyl minocycline carbamate;~~

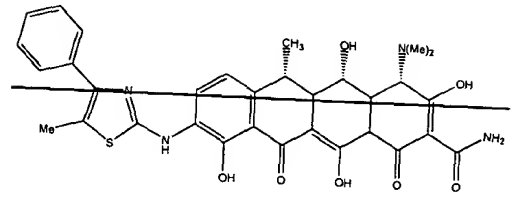
~~9-n-Butyl minocycline carbamate;~~

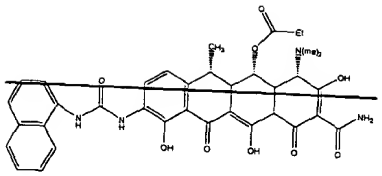
~~9-n-But-3-enyl minocycline carbamate;~~

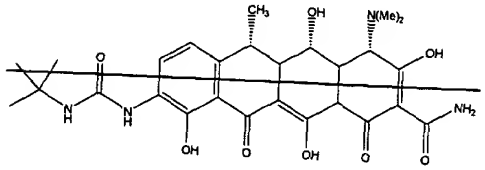
~~9-i-Butyl minocycline carbamate, and pharmaceutically acceptable salts and prodrugs thereof~~.

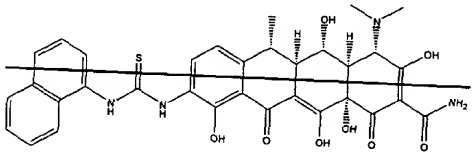
55. (Currently Amended) The compound of claim 1, wherein said compound is ~~selected from the group consisting of:~~

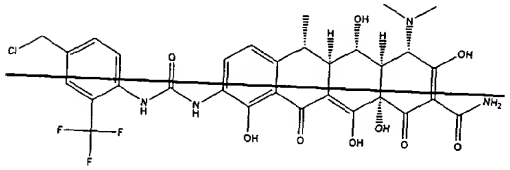


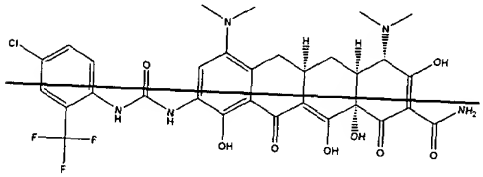


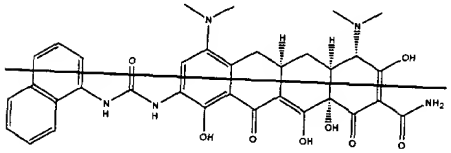


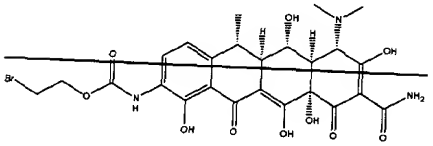


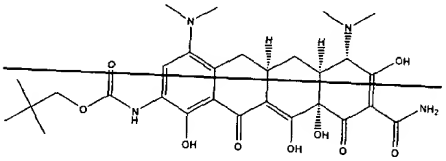


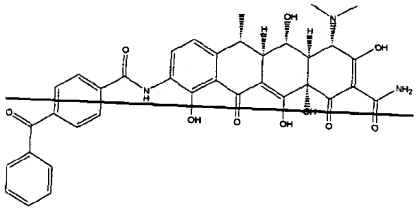


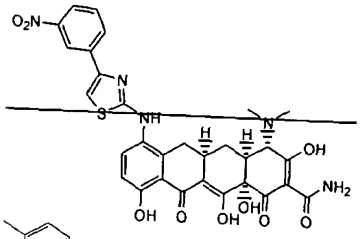


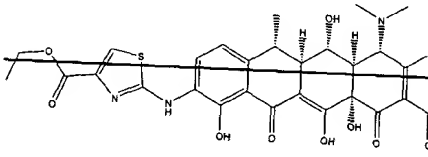


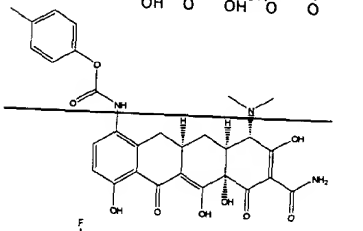


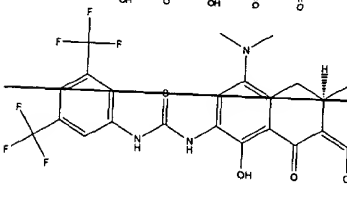


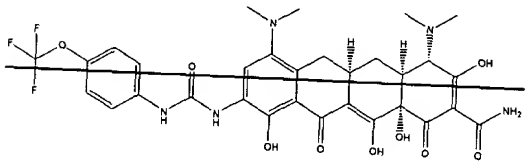


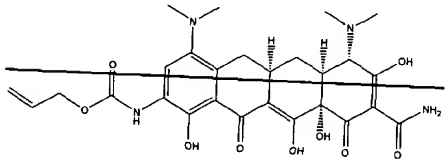








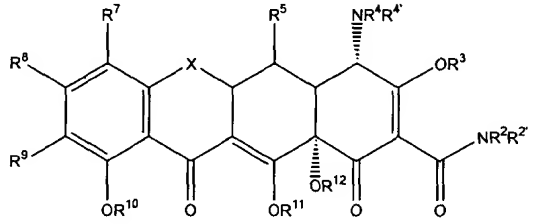




Claims 56-75 (Canceled).

76. (Currently Amended) The compound of claim 1, wherein said compound is ~~selected from the group consisting of: Doxycycline 7-carbamic acid 7*H*-fluoren-7-ylmethyl ester;~~
~~7-(Naphthyn-1-yl) doxycycline urea;~~
~~7-(3-Methyl-1-butyl) doxycycline urea;~~
~~7-Phenyl doxycycline urea;~~
~~7-t-Butyl doxycycline urea;~~
~~7-Fmoc-amino doxycycline;~~
~~7-(4'-Chloro-2-trifluoromethylphenyl) doxycycline urea;~~
~~7-(4'-Fluorophenyl) doxycycline carbamate;~~
~~7-(4'-Methoxyphenyl) doxycycline carbamate;~~
~~7-BOC-amino doxycycline;~~
7-(3'Phenylthiazolyl) amino doxycycline~~;~~
~~7-(3'-Ethylthiazolyl) amino doxycycline;~~
~~7-(4"-Fluorophenylthiazolyl) amino doxycycline;~~
~~7-(4"-Methoxyphenylthiazolyl) amino doxycycline;~~
~~7-(Phenylthiazolylamino) sancycline;~~
~~7-(3'-Nitrophenylthiazolyl) amino doxycycline;~~
~~7-(4'-Methyl, 5'-phenylthiazolyl) amino doxycycline;~~
~~7-(Adamantylthiazolyl) amino doxycycline;~~
~~Doxycycline 7-thiocarbamic acid 7*H*-fluoren-7-ylmethyl ester;~~
~~7-(Naphthyn-1-yl) doxycycline thiourea;~~
~~7-(3-Methyl-1-butyl) doxycycline thiourea;~~
~~7-Phenyl amino doxycycline thiourea;~~
~~7-t-butyl amino doxycycline thiourea;~~
~~7-(4'-Chloro-2'-trifluoromethylphenyl) doxycycline thiourea;~~
~~7-(4'-Fluorophenyl) doxycycline thiocarbamate;~~
~~7-(4'-Methoxyphenyl) doxycycline thiocarbamate;~~
~~7-(Naphthyn-1-yl) doxycycline urea-5-propanoic acid ester;~~
~~7-(Naphthyn-1-yl) doxycycline thiourea-5-propanoic acid ester, and pharmaceutically acceptable salts thereof~~.

77. (Currently Amended) A method for treating a tetracycline responsive state in a mammal, comprising administering to said mammal a substituted tetracycline compound of formula (I):



(I)

wherein

X is $CHC(R^{13}Y'Y)$, $CR^{6'}R^{6}$, S, NR^{6}, or O;

R^{2} is hydrogen, alkyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

R^{4} and $R^{4'}$ are each hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

$R^{2'}$, R^{3}, R^{10}, R^{11} and R^{12} are each hydrogen or a pro-drug moiety;

R^{5} is hydrogen, hydroxyl, or a prodrug moiety;

R^{6}, $R^{6'}$, and R^{8} are each independently hydrogen, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, or halogen;

R^{7} is hydrogen, dialkylamino, or heteroaryl-amino~~, or $NR^{7e}C(=W')WR^{7a}$~~;

R^{13} is hydrogen, hydroxy, alkyl; alkenyl; alkynyl; alkoxy; alkylthio; alkylsulfinyl; alkylsulfonyl; alkylamino; or an arylalkyl;

Y' and Y are each independently hydrogen; halogen; hydroxyl; cyano, sulfhydryl; amino; alkyl; alkenyl; alkynyl; alkoxy; alkylthio; alkylsulfinyl; alkylsulfonyl; alkylamino; or an arylalkyl;

R^{9} is hydrogen, ~~$NR^{9e}C(=Z')ZR^{9a}$~~, or heteroaryl-amino;

~~Z is $CR^{9d}R^{9e}$, NR^{9b}, or O;~~

~~Z' is O or S;~~

~~R^{9a}, R^{9b}, R^{9c}, R^{9d}, and R^{9e} are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, arylsulfonyl, alkoxycarbonyl, arylcarbonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic, absent, or a prodrug moiety, and R^{9d} and R^{9e} may be linked to form a ring;~~

~~W is $CR^{7d}R^{7e}$, NR^{7b} or O;~~

~~W' is O or S; and~~

~~R^{7a}, R^{7b}, R^{7c}, R^{7d}, and R^{7e} are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, arylsulfonyl, alkoxycarbonyl, arylcarbonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic, absent, or a prodrug moiety, and R^{7d} and R^{7e} may be linked to form a ring;~~

and pharmaceutically acceptable salts thereof, provided that when R^9 is not hydrogen when R^7 is hydrogen or dialkylamino.

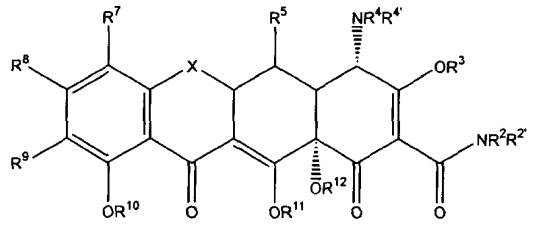
78. (Original) The method of claim 77, wherein said tetracycline responsive state is a bacterial infection.

79. (Original) The method of claim 78, wherein said bacterial infection is associated with *E. coli, S. aureus*, *E. faecalis,* or *E. hirae.*

80. (Original) The method of claim 78, wherein said bacterial infection is resistant to unsubstituted tetracycline compounds.

81. (Original) The method of claim 77, wherein said tetracycline compound is administered with a pharmaceutically acceptable carrier.

82. (Currently Amended) A pharmaceutical composition comprising a therapeutically effective amount of a substituted tetracycline compound and a pharmaceutically acceptable carrier, wherein said substituted tetracycline is of the formula:



(I)

wherein:

X is $CHC(R^{13}Y'Y)$, $CR^{6'}R^6$, S, NR^6, or O;

R^2 is hydrogen, alkyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

R^4 and $R^{4'}$ are each hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

$R^{2'}$, R^3, R^{10}, R^{11} and R^{12} are each hydrogen or a pro-drug moiety;

R^5 is hydrogen, hydroxyl, or a prodrug moiety;

R^6, $R^{6'}$, and R^8 are each independently hydrogen, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, or halogen;

R^7 is hydrogen, dialkylamino, or heteroaryl-amino~~, or $NR^{7e}C(=W')WR^{7a}$~~;

R^{13} is hydrogen, hydroxy, alkyl; alkenyl; alkynyl; alkoxy; alkylthio; alkylsulfinyl; alkylsulfonyl; alkylamino; or an arylalkyl;

Y' and Y are each independently hydrogen; halogen; hydroxyl; cyano, sulfhydryl; amino; alkyl; alkenyl; alkynyl; alkoxy; alkylthio; alkylsulfinyl; alkylsulfonyl; alkylamino; or an arylalkyl;

R^9 is hydrogen~~, $NR^{9e}C(=Z')ZR^{9a}$~~, or heteroaryl-amino;

~~Z is $CR^{9d}R^{9e}$, NR^{9b}, or O;~~

~~Z' is O or S;~~

~~R^{9a}, R^{9b}, R^{9c}, R^{9d}, and R^{9e} are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, arylsulfonyl, alkoxycarbonyl, arylcarbonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic, absent, or a prodrug moiety, and R^{9d} and R^{9e} may be linked to form a ring;~~

~~W is $CR^{7d}R^{7e}$, NR^{7b} or O;~~

~~W' is O or S; and~~

~~R^{7a}, R^{7b}, R^{7c}, R^{7d}, and R^{7e} are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, arylsulfonyl, alkoxycarbonyl, arylcarbonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic, absent, or a prodrug moiety, and R^{7d} and R^{7e} may be linked to form a ring;~~

and pharmaceutically acceptable salts thereof, provided that R^9 is not hydrogen, when R^7 is dialkylamino or hydrogen.

83. (Original) The pharmaceutical composition of claim 82, wherein said therapeutically effective amount is effective for treatment or prevention of a bacterial infection.

84. (Currently Amended) A method for synthesizing a 7- or 9- heteroaryl-amino substituted tetracycline compound, comprising:

contacting a tetracycline compound with a nitrating agent, under conditions such that a nitro tetracycline compound is formed;

contacting the nitro tetracycline compound with a hydrogenating agent, under conditions such that an amino tetracycline compound is formed; and

contacting the amino tetracycline compound with an amino reactive substrate, such that a 9- or 7- heteroaryl-amino substituted tetracycline compound is formed.

85. (Original) The method of claim 84, wherein said substituted tetracycline compound is 9-substituted.

86. (Original) The method of claim 84, wherein said substituted tetracycline compound is 7-substituted.

87. (Original) The method of claim 84, wherein the nitrating agent is $NaNO_2$.

88. (Original) The method of claim 84, wherein the nitrating agent is contacted with the tetracycline compound under acidic conditions.

89. (Original) The method of claim 84, wherein said hydrogenating agent is hydrogen gas.

90. (Original) The method of claim 89, wherein said hydrogenating agent further comprises a transition metal catalyst.

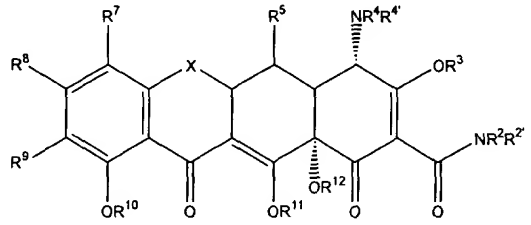
91. (Original) The method of claim 90, wherein said catalyst is platinum.

92. (Original) The method of claim 84, wherein said amino reactive compound is an isocyanate.

93. (Original) The method of claim 84, wherein said amino reactive compound is isothiocyanate.

94. (Original) The method of claim 84, wherein said amino reactive compound is an unsubstituted or substituted chloroformate.

95. (Currently Amended) A method for synthesizing a 7- or 9- substituted tetracycline compound of formula (I) comprising contacting a reactive intermediate with appropriate reagents under appropriate conditions, such that a substituted tetracycline compound is formed, wherein formula (I) is:



(I)

wherein:

X is $CHC(R^{13}Y'Y)$, $CR^{6'}R^6$, S, NR^6, or O;

R^2 is hydrogen, alkyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

R^4 and $R^{4'}$ are each hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic or a prodrug moiety;

$R^{2'}$, R^3, R^{10}, R^{11} and R^{12} are each hydrogen or a pro-drug moiety;

R^5 is hydrogen, hydroxyl, or a prodrug moiety;

R^6, $R^{6'}$, and R^8 are each independently hydrogen, alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, arylalkyl, or halogen;

R^7 is hydrogen, dialkylamino, or heteroaryl-amino~~, or $NR^{7e}C(=W')WR^{7a}$~~;

R^{13} is hydrogen, hydroxy, alkyl; alkenyl; alkynyl; alkoxy; alkylthio; alkylsulfinyl; alkylsulfonyl; alkylamino; or an arylalkyl;

Y' and Y are each independently hydrogen; halogen; hydroxyl; cyano, sulfhydryl; amino; alkyl; alkenyl; alkynyl; alkoxy; alkylthio; alkylsulfinyl; alkylsulfonyl; alkylamino; or an arylalkyl;

R^9 is hydrogen, ~~$NR^{9e}C(=Z')ZR^{9a}$~~, or heteroaryl-amino;

~~Z is $CR^{9d}R^{9e}$, NR^{9b}, or O;~~

~~Z' is O or S;~~

~~R^{9a}, R^{9b}, R^{9c}, R^{9d}, and R^{9e} are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, alkylsulfonyl, arylsulfonyl, alkoxycarbonyl, arylcarbonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic, absent, or a prodrug moiety;~~

~~W is $CR^{7d}R^{7e}$, NR^{7b} or O;~~

~~W' is O or S; and~~

~~R^{7a}, R^{7b}, R^{7c}, R^{7d}, and R^{7e} are each independently hydrogen, alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylsulfinyl, arylsulfonyl, alkoxycarbonyl, arylcarbonyl, alkylamino, arylalkyl, aryl, heterocyclic, heteroaromatic, absent, or a prodrug moiety;~~

and pharmaceutically acceptable salts thereof, provided that R^9 is not hydrogen when R^7 is dialkylamino or hydrogen.

96. (Original) The method of claim 95, wherein said reactive intermediate is a 7- or 9- diazonium salt.

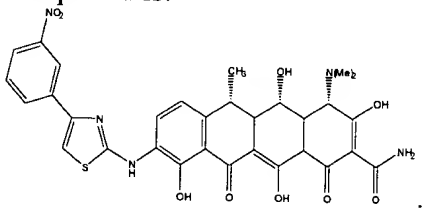
97. (Original) The method of claim 95, wherein said reactive intermediate is a 7- or 9- nitro compound.

98. (Original) The method of claim 95, wherein said reactive intermediate is a 7- or 9- thiourea.

99. (Original) The method of claim 95, wherein said reactive intermediate is a 7- or 9- thiocarboxamide.

Claims 100-102 (Canceled).

103. (Currently Amended) The compound of claim 1~~55~~, wherein said compound is:



104. (New) The compound of claim 1, wherein said compound is 9-(Ethylthiazolyl) amino doxycycline.

105. (New) The compound of claim 1, wherein said compound is (4-Fluorophenylthiazolyl) amino doxycycline.

106. (New) The compound of claim 1, wherein said compound is 9-(4'-Methoxyphenylthiazolyl) amino doxycycline.

107. (New) The compound of claim 1, wherein said compound is 9-(3'-Nitrophenylthiazolyl) amino doxycycline.

108. (New) The compound of claim 1, wherein said compound is 9-(4'-Methyl, 5'-phenylthiazolyl) amino doxycycline.

109. (New) The compound of claim 1, wherein said compound is 9-(Phenylthiazolyl) amino sancycline.

110. (New) The compound of claim 1, wherein said compound is 9-(Adamantylthiazolyl) amino doxycycline.

111. (New) The compound of claim 1, wherein said compound is 9-(Phenylthiazolyl) amino minocycline.

112. (New) The compound of claim 1, wherein said compound is 9-(Ethylthiazolyl) amino minocycline.

113. (New) The compound of claim 1, wherein said compound is (4'-Fluorophenylthiazolyl) amino minocycline.

114. (New) The compound of claim 1, wherein said compound is 9-(4'-Methoxyphenylthiazolyl) amino minocycline.

115. (New) The compound of claim 1, wherein said compound is 9-(3'-Nitrophenylthiazolyl) amino minocycline.

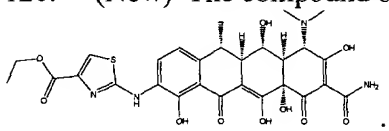
116. (New) The compound of claim 1, wherein said compound is 9-(4'-Methyl, 5'-phenylthiazolyl) amino doxycycline.

117. (New) The compound of claim 1, wherein said compound is 9-(Adamantylthiazolyl) amino minocycline.

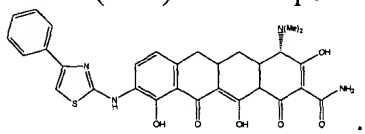
118. (New) The compound of claim 1, wherein said compound is 7-(3'-Nitrophenylthiazolyl) amino sancycline.

119. (New) The compound of claim 1, wherein said compound is 9-(3'-Ethoxycarbonylthiazolyl) amino doxycycline.

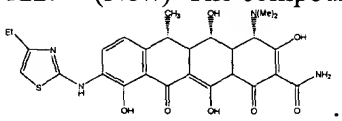
120. (New) The compound of claim 1, wherein said compound is



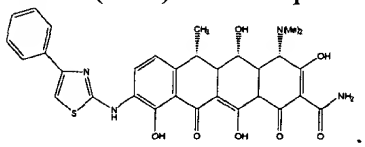
121. (New) The compound of claim 1, wherein said compound is:



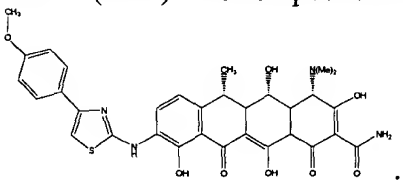
122. (New) The compound of claim 1, wherein said compound is:



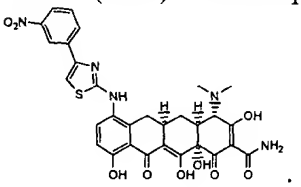
123. (New) The compound of claim 1, wherein said compound is:



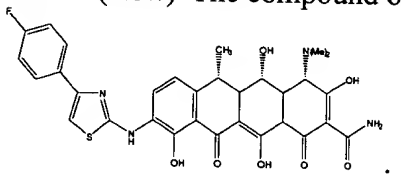
124. (New) The compound of claim 1, wherein said compound is:



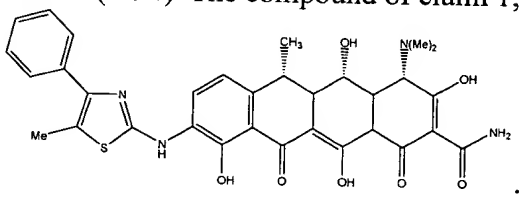
125. (New) The compound of claim 1, wherein said compound is:



126. (New) The compound of claim 1, wherein said compound is:



127. (New) The compound of claim 1, wherein said compound is:



128. (New) The compound of claim 1, wherein said compound is: 7-(Adamantylthiazolyl) amino doxycycline.

129. (New) The compound of claim 1, wherein said compound is 7-(3'-Ethylthiazolyl) amino doxycycline.

130. (New) The compound of claim 1, wherein said compound is 7-(4"-Fluorophenylthiazolyl) amino doxycycline.

131. (New) The compound of claim 1, wherein said compound is 7-(4"-Methoxyphenylthiazolyl) amino doxycycline.

132. (New) The compound of claim 1, wherein said compound is 7-(Phenylthiazolylamino)-sancycline.

133. (New) The compound of claim 1, wherein said compound is 7-(3'-Nitrophenylthiazolyl) amino doxycycline.

134. (New) The compound of claim 1, wherein said compound is 7-(4'-Methyl, 5'-phenylthiazolyl) amino doxycycline.